

Utah Mastery - Collection

Collection I

Collection II

Collection III

Collection IV

Objective	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points
Perf Admin Duties	4	3.14	4	3.91	7	5.75	13	8.17
(March)	3	1.83	5	4.7	7	5.25	13	11
(Fall)	3	2.13	5	4.81	7	5.75	13	9.06
<i>Perform administrative duties, such as complying with regulatory and recordkeeping requirements.</i>								
Perform Admin Duties-Math					1	1	3	2.17
(March)					1	0.75	3	3
(Fall)					1	0.88	3	2.06
<i>Perform mathematical calculations related to administrative duties, such as budgeting.</i>								
Evaluate Equip-Math	1	0.57	1	345				
(March)	1	0.67						
(Fall)	1	0.5						
<i>Perform mathematical calculations related to evaluating equipment, such as calculating pressure head</i>								
Evaluate Op of Equip	4	2.57	6	4.55	3	1.75	5	2.78
(March)	4	2.58	6	5	3	2	5	5
(Fall)	4	1.75	6	5.03	3	2.13	5	3.56
<i>Inspect equipment and read charts, meters and pressure gauges</i>								
Maintain & Restore System	15	11.43	13	9.18	13	9.5	15	9.67
(March)	15	10.5	13	9.4	13	9.25	15	13
(Fall)	15	9.38	13	10.44	13	10.5	15	9.19
<i>Clean, inspect, rehabilitate and repair system.</i>								
Maintain & Restore System-Math			2	1.18	2	1.25		
(March)			2	1	2	1.5		
(Fall)			2	1.06	2	1.63		
<i>Perform mathematical calculations related to maintaining and restoring the collection system.</i>								
Maintain Equip-Math					1	0.25		
(March)			1	0	1	0		
(Fall)			1	0.5	1	0.5		
<i>Perform mathematical calculations such as area and volume.</i>								
Maintain Equip	5	3.14	8	5.91	11	9	10	7.17
(March)	5	3.83	8	6.9	11	9.75	10	9
(Fall)	5	3.63	8	6.84	9	6	10	7.06
<i>Maintain chemical feeders, motors, pumps, valves, etc.</i>								
Maintain Lift Stations	9	4.43	9	7	9	5.5	8	5.5
(March)	9	5.75	9	6.3	9	4.5	8	6
(Fall)	9	4.5	9	6.94	9	6	8	5.06
<i>Maintain electrical, electronic, and mechanical aspects of lift stations.</i>								
Maintain Lift Stations-Math	1	0.43	1	0.36	1	0.25	2	1.17
(March)	1	0.67	1	0.1	1	0.5	2	2
(Fall)	1	0.38	1	0.5	1	0.75	2	0.88
<i>Perform mathematical calculations related to maintaining lift stations.</i>								
Collection System	28	20.86	23	14.55	20	15.25	19	12.89
(March)	28	21.75	23	14.5	20	13.5	19	16
(Fall)	28	18.88	23	15.31	20	13.38	19	12.56
<i>Monitor, evaluate, and adjust force mains, sewers, lift stations, manholes, measuring and control systems, etc.</i>								
Collection System-Math	7	5.71	7	5.73	5	3	6	2.94
(March)	7	4.17	7	3.5	5	2.5	6	6
(Fall)	7	3.13	7	4.84	5	2.5	6	3.38
<i>Perform mathematical calculations related to the collection system.</i>								
Operate Equipment-Math	2	1.86	3	1.09	4	2.25	2	0.89
(March)	2	1.67	3	0.8	4	2.25	2	2
(Fall)	2	1.5	3	1.47	4	2.13	2	1.06
<i>Perform mathematical calculations for operating equipment, such as detention time, dosage, efficiency, feed rate, and pumping rate.</i>								
Operate Equipment	13	9.29	12	6.82	11	6.25	13	7.06
(March)	13	8.83	12	6	11	4.75	13	9
(Fall)	13	7.63	12	7.69	11	3.88	13	8.13
<i>Operate support equipment, such as blowers, chemical feeders, motors, pumps and valves.</i>								
Perf Security & Safety Proc	11	7.71	11	8.09	11	8.75	4	3.44
(March)	12	10.42	10	8.2	11	7.75	4	4
(Fall)	12	10.25	10	9.38	11	8	4	3.06
<i>Perform security and safety procedures, such as confined space entry, lock-out/tag-out, and personal protective equipment.</i>								
Security & Safety Proc.-Math					1	0.25		
(March)					1	0.25		
(Fall)					1	0.5		
<i>Perform mathematical calculations related to security and safety procedures.</i>								

Utah Mastery - Treatment	Treatment I		Treatment II		Treatment III		Treatment IV	
	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points
Objective								
Perform Admin Duties	7	5.88	7	5.29	16	11	20	11.41
(March)	7	6.33	7	6	14	9		
(Fall)	7	6.55	7	5.07	14	10.46	20	14.21
Perform administrative duties, such as complying with regulatory and recordkeeping requirements.								
Perform Admin Duties-Math	2	1.63	1	0.47	1	0.44	2	0.82
(March)	2	1	1	1	2	1.2		
(Fall)	2	1.55	1	0.67	2	1.23	2	1.04
Perform mathematical calculations related to administrative duties, such as budgeting.								
Collect Samples & Interpret Analysis	4	2.63	3	2	5	3.56	8	2.82
(March)	4	3	3	1.5	6	2.8		
(Fall)	4	2.73	3	1.4	6	2.08	9	4.67
Perform mathematical calculations related to evaluating equipment, such as calculating pressure head								
Evaluate Wastestream-Math	1	0.63					1	0.45
(March)	1	0.67						
(Fall)	1	0.82					2	0.93
Inspect equipment and read charts, meters and pressure gauges								
Effluent Discharge & Reuse-Math	1	0.63						
(March)	1	0.67						
(Fall)	1	0.45						
Perform mathematical calculations related to discharge to lagoons, on-site disposal, solids composting, etc.								
Effluent Discharge & Reuse	1	0.75			1	0.44		
(March)	1	1			1	0.2		
(Fall)	1	1			1	0.31	1	0.5
Monitor, evaluate, and adjust discharge to lagoons, on-site disposal, solids composting, etc.								
Evaluate Equipment-Math			2	0.94	5	2.67	5	2.14
(March)			3	1	5	2.4		
(Fall)			3	0.93	5	3.08	5	2.21
Perform mathematical calculations related to evaluating equipment, such as calculating pressure head.								
Evaluate Operation of Equip	2	1.13	7	3.59	4	2.56	7	3.36
(March)	2	1.33	7	3.5	3	2.8		
(Fall)	2	1.27	7	3.53	3	2.46	8	3.17
Inspect equipment and read charts, meters and pressure gauges.								
Evaluate Wastestream Characteristics	4	2.5	5	3.82	10	6.33	14	7.05
(March)	4	4	5	3.5	10	8.4		
(Fall)	4	3.27	5	4.2	10	6.15	13	7.58
Evaluate color, flow pattern, foam, odor, temperature, volume, solids concentration, and mixing pattern of wastestream.								
Interpret Laboratory Analyses-Math			2	0.29	2	0.33		
(March)			2	0	2	1.4		
(Fall)			2	0.53	2	1.38		
Perform mathematical calculations related to BOD, chlorine residual, dissolved oxygen, pH, solids, etc.								
Interpret Laboratory Analyses	1	0.5			3	1.78	2	1.27
(March)	1	0.67			2	1		
(Fall)	1	0.45			2	1	1	0.29
Interpret results for BOD, chlorine residual, dissolved oxygen, pH, solids, etc.								
Chemical Addition	3	2.13	1	0.41				
(March)	3	2						
(Fall)	3	2.36						
Monitor, evaluate, and adjust dry, gaseous, and liquid chemicals.								
Disinfection	2	1.75	1	0.59				
(March)	2	1.33	1	0				
(Fall)	2	1.64	1	0.67				
Monitor, evaluate, and adjust the disinfection process.								
Preliminary Treatment	3	2.25	3	1.53	1	0.22		
(March)	3	2	3	2	1	0.2		
(Fall)	3	1.82	3	1.8	1	0.85		
Monitor, evaluate, and adjust plant pumping of main flow, screening, grit removal, and flow equalization.								
Primary Treatment	4	2.25	4	2.65				
(March)	4	2.33	4	2				
(Fall)	4	2.91	4	2.4				
Monitor, evaluate, and adjust clarifiers.								
Primary Treatment-Math	3	0.75						
(March)	1	0						
(Fall)	1	0.36						
Perform mathematical calculations related to clarifiers.								
Secondary Treatment	12	7.63	12	6.35	3	1.67	3	0.91
(March)	12	8.33	12	4.5	3	1.6		
(Fall)	12	8.45	12	6.93	3	1.69	2	0.75
Monitor, evaluate, and adjust fixed-film reactors, activated sludge, and stabilization ponds.								

Utah Mastery - Treatment	Treatment I		Treatment II		Treatment III		Treatment IV	
Objective	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points	Points Possible	Average Points
Secondary Treatment-Math	1	0.38	2	0.53	1	0.22	4	1.64
(March)	3	1.67	2	0.5				
(Fall)	3	1.64	2	0.93			4	1.38
<i>Perform mathematical calculations related to fixed-film reactors, activated sludge, and stabilization ponds.</i>								
Solids Handling	1	0.75	1	0.76	3	1.67		
(March)	1	0.67	1	0	5	3		
(Fall)	1	0.91	1	0.53	5	3.38		
<i>Monitor, evaluate, and adjust conditioning, dewatering, stabilization, thickening, and volume reduction.</i>								
Solids Handling-Math			1	0.41	2	1	1	0.27
(March)	1	0.67	1	0.5	2	0.6		
(Fall)	1	0.64	1	0.2	2	0.92	1	0.5
<i>Perform mathematical calculations related to conditioning, dewatering, stabilization, thickening, and volume reduction.</i>								
Advanced (Tertiary) Treatment	2	1.13	4	1.82	4	2	2	0.82
(March)	2	1.67	5	3	3	1.6		
(Fall)	2	1.45	5	2.4	3	1.46	2	1.25
<i>Monitor, evaluate, and adjust carbon adsorption, air stripping, chemical coagulation, precipitation, nitrification, denitrification, phosphorus removal, etc.</i>								
General Math	2	0.75	1	0.47				
(March)	1	0.33	1	0.5				
(Fall)	1	0.64	1	0.2				
<i>Perform mathematical calculations such as flow measurement.</i>								
Operate Equipment	10	6.88	10	6.47	10	6.33	9	5.41
(March)	10	7.33	10	6	10	7.6		
(Fall)	10	7.45	10	6.13	10	6.69	10	5.63
<i>Operate support equipment, such as blowers, chemical feeders, motors, pumps and valves.</i>								
Operate Equipment-Math							1	0.32
(March)								
<i>Perform mathematical calculations for operating equipments, such as detention time, dosage, efficiency, feed rate, and pumping rate.</i>								
Perform Laboratory Analyses	10	6.38	10	5.24	5	2.11	5	2.14
(March)	10	5.33	10	5	5	1.8		
(Fall)	10	6.27	10	4.8	5	1.92	5	2.13
<i>Perform laboratory analyses for alkalinity, chlorine residual, dissolved oxygen, pH, settleability testing, solids, temperature, turbidity, etc.</i>								
Maintain Equipment	8	5.5	10	7.12	11	7.33	8	5.05
(March)	8	7.33	10	9	12	6.4		
(Fall)	8	6.64	10	6.93	12	6.85	7	4.71
<i>Maintain chemical feeders, motors, pumps, valves, etc.</i>								
Maintain Equipment-Math			1	0.53				
(March)								
(Fall)								
<i>Perform mathematical calculations such as area and volume.</i>								
Perform Security & Safety Procedures	15	11.88	11	8.76	9	6.56	4	2.23
(March)	15	12	11	8.5	9	6.4		
(Fall)	15	12	11	9.07	9	6.23	4	2.96
<i>Perform security and safety procedures, such as confined space entry, lock-out/tag-out, and personal protective equipment.</i>								
Perform Security Procedures	1	0.88	1	0.71	4	2.89	4	2.32
(March)	1	1	1	0.5	5	3.6		
(Fall)	1	1	1	0.73	5	3.85	4	3.08
<i>Perform Security Procedures related to emergency preparedness.</i>								